

We claim

1. A method for sending data packets from a first communication subsystem via a first network element to a second network element in a second communication subsystem;
5 the method comprising the steps of:
 sending the data packets in a first plurality of data flows in the first communication subsystem;
 mapping the first plurality of data flows to a second plurality of data flows in the second communications subsystem;
10 establishing at least one filter for controlling the mapping;
 associating the at least one filter with a data flow within the second plurality; and
 mapping at least one data flow on the basis of the filter.
2. A method according to claim 1, further comprising configuring the
15 filter from the second network element.
3. A method according to claim 2, further comprising configuring the filter in a packet data protocol context activation or modification message.
4. A method according to claim 3, further comprising configuring at least two filters in one packet data protocol context activation or modification
20 message and identifying each filter with a distinct identifier.
5. A method according to claim 2, further comprising configuring the at least one filter in a dedicated message.
6. A method according to claim 2, further comprising configuring the filter in a message which is transparent to at least some nodes between the
25 first and the second network elements.
7. A method according to claim 1, wherein the first communications subsystem is an Internet Protocol network, or IP network, and the method comprises allocating one IP address which is shared by all data flows within the second plurality.

8. A method according to claim 1, wherein the first communications subsystem is an Internet Protocol network, and the method comprises allocating a separate Internet Protocol address to each data flow within the second plurality.

5 9. A method according to claim 1, wherein the second communications subsystem is a packet radio network employing packet radio protocol, and the configuring step comprises sending a packet radio protocol context activation message or a packet radio protocol context modification message.

10 10. A method according to claim 1, wherein the associating is based on the second network element's address, preferably its IP address, in the first communication subsystem.

 11. A method according to claim 1, wherein the associating is based on the second network element's identifier in the second communication subsystem.

15 12. A method according to claim 11, wherein the second network element's identifier is its International Mobile Subscriber Identity or tunnel identifier.

 13. A method according to claim 1, further comprising:
 performing the mapping on the basis of the filter to data flows conveying real-time information; and
20 establishing default parameters for mapping the remaining data flows.

 14. A method according to claim 1, further comprising defining one data flow within the second plurality as a default data flow, to which all data
25 flows of the first plurality are mapped which do not conform to the at least one filter.

 15. A method according to claim 1, wherein at least one of the data flows is bidirectional having a first direction from the first plurality to the second plurality and a second direction which is inverse to the first direction, and the at

least one filter is modified on the basis of user data packets sent in the second direction.

16. A method according to claim 15, wherein a gateway element mapping the data flows:

- 5 receives a data packet in the second direction from a first data flow within the second plurality;
- forwards the data packet to a second data flow within the first plurality; and
- modifies the at least one filter for mapping the second data flow to
- 10 the first data flow.

17. A method according to claim 1, wherein at least one data flow within the first plurality is tunneled over a data flow within the second plurality, and at least two data flows within the second plurality have mutually different Quality of Service characteristics.

- 15 18. A method according to claim 1, wherein the second network element is a mobile station.

19. A first network element, preferably a Gateway GPRS Support Node, for routing data packets from a first communication subsystem to a second network element in a second communication subsystem;

- 20 the first network element being adapted to:
- receive the data packets from the first communication subsystem in a first plurality of data flows;
- map the first plurality of data flows to a second plurality of data flows in the second communication subsystem;
- 25 establish at least one filter for controlling the mapping;
- associate the at least one filter with a data flow within the second plurality; and
- map at least one data flow on the basis of the filter.

- 30 20. A digital configuration signal for creating or modifying a packet data protocol context in a support node for interfacing a first communication subsystem with a second communication subsystem; the digital configuration

signal comprising information which at least partially defines a filter for controlling mapping of data flows from the first communication subsystem to the second communication subsystem by the support node.

21. A mobile station for a packet radio network, operable to send a
5 digital configuration signal for creating or modifying a packet data protocol context in a support node for interfacing an external communication subsystem with the packet radio network;

wherein the digital configuration signal comprises information which
at least partially defines a filter for controlling mapping of data flows from the
10 external communication subsystem to the packet radio network by the support node.